Alberta
HUMAN RESOURCES AND EMPLOYMENT
the people & workplace department

September 2001

# Occupational Injuries and Diseases in Alberta

## Trucking
## 1996 to 2000

## Alberta Trucking Safety Association Industries

102-07234/

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# 1. Introduction

*The Mission of Alberta Human Resources and Employment*

Alberta Human Resources and Employment's mission is to foster safe and healthy workplaces. Workplace Health and Safety works within the continuum of services provided by Alberta Human Resources and Employment. Its focus is on the development and implementation of strategies and initiatives aimed at meeting the department's goal that Alberta will have a fair, safe and healthy work environment. To this end, Alberta Human Resources and Employment recognizes that monitoring workplace health and safety will help to ensure that primary concerns are actively managed and that resources are directed where needed.

This report summarizes the descriptions lost-time injuries and disease, characteristics of the injured worker, and the risk of injury to workers in the Alberta Trucking Safety Association industries between the years 1996 and 2000. A summary of occupational fatalities accepted by the Workers Compensation Board (WCB) and a brief description of those fatalities investigated by Occupational Health and Safety (OHS) in these industries are also provided. Cost of injuries and revenue in terms of employer premiums are also provided.

## 2. Industry Descriptions

***Specialized Trucking Services (Industry # 50701)***

This industry describes the operation of specialized for-hire trucking equipment to allow for specialized off-loading services, off-highway transportation, and to accommodate the transportation of over-sized and/or overweight loads, such as large construction equipment/cranes, lengths of precast concrete, plant equipment/vessels, etc.

Businesses may own or lease trucks, vehicles and equipment and shipping/receiving facilities or terminals. Businesses may opt to subcontract lease operators to provide trucking/delivery services, while only conducting scheduling, dispatching, and billing services in-house.
Pilot vehicles may be required to escort oversized loads that are integral to this industry, while also providing occasional hot-shot services.

Businesses may utilize trucks with pickers, booms, winches, tow bars; and trailers such as low-boys, center-drop, extendible, gooseneck are examples. It is recognized specialized trucking businesses may utilize and operate flat deck trailers as well. Businesses may operate warehouse/terminal/storage yards, vehicle repair facilities and dispatch equipment. Staff requirements may include drivers, laborers, yard/warehouse workers, mechanics, dispatch/traffic/logistics staff, sales/estimators, office/administration.

Businesses in this industry may be affiliated with the Alberta Trucking Association. Towing or hauling mobile, modular or industrial camps on dollies or their own axles are also activities within this industry

***General Delivery Trucking Services (Industry # 50714)***

This industry describes general for-hire trucking and delivery services for the movement of various commodities and products locally, provincially, to or from Alberta and destination elsewhere in Canada or in North America. Shipment requiring the use of specialized or oilfield equipment is classified elsewhere.

Businesses may own or lease truck, vehicles and equipment and shipping/receiving facilities or terminals. Businesses may opt to subcontract lease operators to provide trucking/delivery services, while only conducting scheduling, dispatching, and billing services in-house. Terminals for consolidation and distribution and storage lay-over services are often provided. Receiving terminals sometimes referred to as cross-dock or pool car operations for the purpose of consolidating loads for local distribution only, is in this industry.

This industry describes for-hire delivery businesses such as couriers, mail contracting, house or office moving, bulk hauling of sand, dirt, gravel etc., dry bulk shipment of fertilizer, grain, etc., tanker trucking of petroleum, water, etc., and livestock and auto hauling and general freight services.

Vehicles and equipment in this industry are diverse: from trucks of all size such as vans flatdeck, bulk carriers, tankers, etc., also cars, bikes, pallet jacks, forklifts, warehouse/terminal/storage yards, vehicle repair facilities, dispatch equipment. Staff requirements extend from drivers, laborers (swampers), yard/warehouse workers, mechanics, dispatch/traffic/logistics staff, sales/estimators, and office/administration.
Businesses in this industry may be affiliated with the Alberta Trucking Association

*Garbage/Waste Collection & Disposal Services (Industry # 57901)*

This industry includes employers providing the services of hauling and disposing of general waste or garbage from residential, commercial and industrial premises; generally using specialized equipment. This is primarily a utility services contracted to municipal governments.
This industry includes operating a landfill as part of a waste collection business or as a separate business.

The collection of residential garbage involves manual labour to lift the garbage into the garbage truck. The trucks used in the collection of residential garbage are generally equipped with special box, which has hydraulic doors, to assist the garbage collectors.

Employers involved in the collection of industrial and commercial garbage generally use garbage trucks, which are equipped with hydraulic lifting devices that pick up and empty large bins. The waste collection firm often provides these steel collection containers to the job sites.

Employers who specialized in operating a landfill, or operate a landfill as a part of garbage collection process, are classified in this classification. The equipment used by the landfills includes compactors, sorters, shredders and mobile equipment.

# 3. Lost-Time Claims & Claim Rates

## All Trucking Safety Association Industries

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 9,756 | $9,465,804 | 30,058 | 82,659 | 275 | 2,301 | 7.7 |
| 1997 | 10,774 | $12,239,447 | 33,113 | 81,684 | 247 | 2,311 | 7.0 |
| 1998 | 11,576 | $12,246,013 | 35,758 | 89,317 | 250 | 2,334 | 6.5 |
| 1999 | 11,975 | $8,352,647 | 35,962 | 85,344 | 237 | 2,259 | 6.3 |
| 2000 | 12,570 | $16,428,708 | 37,550 | 114,551 | 305 | 2,579 | 6.9 |

## 3.1 Lost-Time Claim Rates by Industry

### *50701-Specialized Trucking Services*

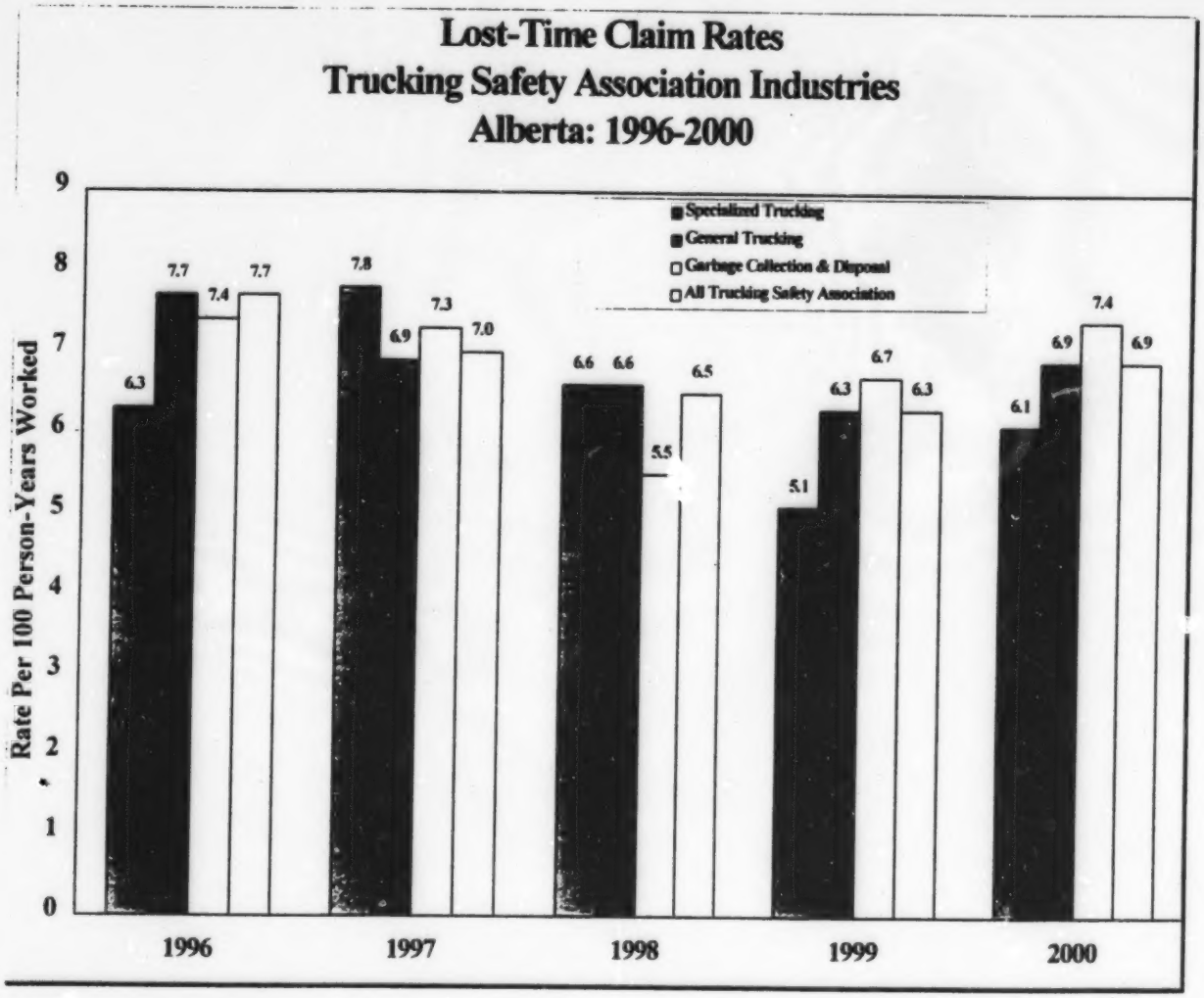
| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 535 | $556,917 | 1,356 | 3,870 | 285 | 85 | 6.3 |
| 1997 | 651 | $1,110,312 | 1,341 | 6,028 | 450 | 105 | 7.8 |
| 1998 | 714 | $531,213 | 1,372 | 4,816 | 351 | 90 | 6.6 |
| 1999 | 751 | $232,487 | 1,305 | 3,289 | 252 | 66 | 5.1 |
| 2000 | 790 | $1,489,283 | 1,579 | 5,461 | 346 | 96 | 6.1 |

### *50714-General Trucking Services*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 9,104 | $8,690,665 | 27,668 | 76,474 | 276 | 2,139 | 7.7 |
| 1997 | 9,966 | $10,761,413 | 30,733 | 72,759 | 237 | 2,130 | 6.9 |
| 1998 | 10,696 | $11,471,394 | 33,162 | 82,244 | 248 | 2,177 | 6.6 |
| 1999 | 11,049 | $7,910,178 | 33,485 | 79,612 | 238 | 2,115 | 6.3 |
| 2000 | 11,597 | $14,590,178 | 34,811 | 106,575 | 306 | 2,397 | 6.9 |

*57901- Garbage Collection and Disposal*

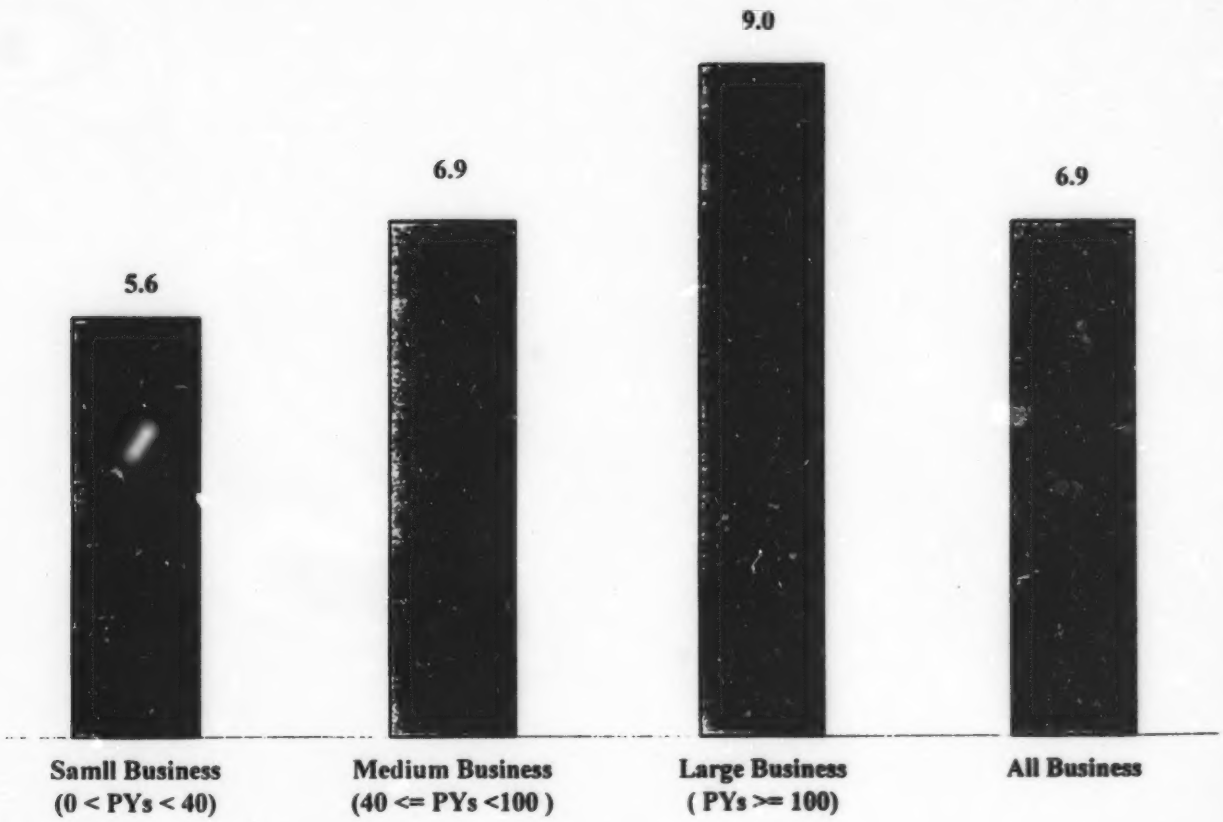
| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 117 | $218,222 | 1,034 | 2,315 | 224 | 77 | 7.4 |
| 1997 | 157 | $367,723 | 1,039 | 2,897 | 279 | 76 | 7.3 |
| 1998 | 166 | $243,407 | 1,225 | 2,257 | 184 | 67 | 5.5 |
| 1999 | 175 | $209,982 | 1,171 | 2,443 | 209 | 78 | 6.7 |
| 2000 | 183 | $349,247 | 1,161 | 2,515 | 217 | 86 | 7.4 |


Lost-Time Claim Rates
Trucking Safety Association Industries
Alberta: 1996-2000
Rate Per 100 Person-Years Worked
0
1
2
3
4
5
6
7
8
9
Specialized Trucking
General Trucking
Garbage Collection & Disposal
All Trucking Safety Association
6.3
7.7
7.4
7.7
7.8
6.9
7.3
7.0
6.6
6.6
5.5
6.5
5.1
6.3
6.7
6.3
6.1
6.9
7.4
6.9
1996
1997
1998
1999
2000

## 3.2 Lost-Time Claim Rates by Size of Employer: 2000

| Size of Employer | # of Accounts | LTCs | Person - Years | LTC Rate |
|---|---|---|---|---|
| A: 0 <= PYs < 1 | 8,798 | 199 | 3,805 | 5.2 |
| B: 1 <= PY < 5 | 2,764 | 265 | 5,661 | 4.7 |
| C: 5 <= PYs < 10 | 461 | 176 | 3,238 | 5.4 |
| D: 10 <= PYs < 20 | 267 | 226 | 3,682 | 6.1 |
| E: 20 <= PYs < 40 | 135 | 249 | 3,672 | 6.8 |
| F: 40 <= PYs < 100 | 90 | 386 | 5,573 | 6.9 |
| G: PYs >=100 | 50 | 1,073 | 11,917 | 9.0 |
| H: Invalid | 5 | 5 | N/A | N/A |
| Total | 12,570 | 2,579 | 37,550 | 6.9 |

**LTC Rates By Size of Employer**
**Alberta: 2000**



# 4. Analysis of the Lost-time Claims

## 4.1 Nature of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| SPRAIN, STRAIN, TEARS | 1,079 | 1,212 | 1,181 | 1,084 | 1,189 | 5,745 | 48.8 |
| FRACTURE/DISLOCATION | 284 | 322 | 321 | 260 | 271 | 1,458 | 12.4 |
| OTHER TRAUMATIC INJURY/DISEASE | 235 | 178 | 240 | 341 | 445 | 1,439 | 12.2 |
| SURFACE WOUNDS, BRUISES | 285 | 278 | 293 | 258 | 311 | 1,425 | 12.1 |
| OPEN WOUNDS | 106 | 124 | 108 | 86 | 110 | 534 | 4.5 |
| NATURE - UNS | 155 | 63 | 59 | 100 | 118 | 495 | 4.2 |
| SYSTEMATIC DISEASES, DISORDERS | 87 | 63 | 75 | 84 | 89 | 398 | 3.4 |
| BURNS | 25 | 36 | 33 | 26 | 27 | 147 | 1.2 |
| MULTIPLE DISEASE/DISORDERS | 36 | 25 | 10 | 10 | 7 | 88 | 0.7 |
| OTHER DISEASE/DISORDERS | 7 | 10 | 7 | 6 | 10 | 40 | 0.3 |
| SYMPTONS, SIGN/ILL | 1 | . | 6 | 4 | 1 | 12 | 0.1 |
| INFECTIOUS/PARASITIC DISEASE | 1 | . | . | . | 1 | 2 | 0.0 |
| TUMORS, CANCER | . | . | 1 | . | . | 1 | 0.0 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 4.2 Duration of Disability

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| 01 - 05 DAYS LOST | 690 | 705 | 686 | 652 | 702 | 3,435 | 29.1 |
| 06 - 10 DAYS LOST | 333 | 318 | 307 | 294 | 358 | 1,610 | 13.7 |
| 11 - 15 DAYS LOST | 188 | 166 | 210 | 188 | 184 | 936 | 7.9 |
| 16 - 20 DAYS LOST | 134 | 125 | 120 | 112 | 153 | 644 | 5.5 |
| 21 - 30 DAYS LOST | 172 | 200 | 177 | 193 | 208 | 950 | 8.1 |
| 31 - 40 DAYS LOST | 128 | 133 | 125 | 124 | 113 | 623 | 5.3 |
| 41 - 50 DAYS LOST | 101 | 92 | 95 | 88 | 99 | 475 | 4.0 |
| 51 OR MORE DAYS LOST | 507 | 508 | 564 | 538 | 683 | 2,800 | 23.8 |
| DAYS LOST-UNSPECIFIED | 48 | 64 | 50 | 70 | 79 | 311 | 2.6 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 4.3 Type of Event/Exposure

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| OVEREXERTION | 536 | 529 | 572 | 605 | 648 | 2,890 | 24.5 |
| TRANSPORTATION ACCIDENTS | 281 | 299 | 318 | 273 | 373 | 1,544 | 13.1 |
| STRUCK BY OBJECTS | 217 | 294 | 259 | 185 | 269 | 1,224 | 10.4 |
| BODILY REACTION | 280 | 247 | 235 | 239 | 223 | 1,224 | 10.4 |
| FALL TO LOWER LEVEL | 207 | 223 | 235 | 199 | 235 | 1,099 | 9.3 |
| FALL ON SAME LEVEL | 191 | 174 | 184 | 187 | 273 | 1,009 | 8.6 |
| CAUGHT IN OBJECTS | 95 | 117 | 103 | 99 | 109 | 523 | 4.4 |
| STRUCK AGAINST OBJECTS | 87 | 94 | 102 | 90 | 88 | 461 | 3.9 |
| OTHER FALLS | 53 | 71 | 60 | 89 | 51 | 324 | 2.7 |
| EXPOSURE TO HARMFUL SUBSTANCES | 54 | 55 | 49 | 44 | 46 | 248 | 2.1 |
| REPETITIVE MOTIONS | 18 | 8 | 11 | 28 | 33 | 98 | 0.8 |
| RUBBED OR ABRADED | 14 | 26 | 25 | 16 | 9 | 90 | 0.8 |
| OTHER BODILY REACTION/EXERTION | 7 | 19 | 19 | 19 | 22 | 86 | 0.7 |
| OTHER ASSAULTS/VIOLENT | 5 | 2 | 4 | 5 | 8 | 24 | 0.2 |
| FIRES AND EXPLOSIONS | 4 | 7 | 6 | 2 | 3 | 22 | 0.2 |
| OTHER CONTACT WITH OBJECT/EQUIP | 2 | 6 | 8 | 1 | 2 | 19 | 0.2 |
| ASSAULT/VIOLENT ACT BY PERSON | 1 | 2 | 4 | 4 | 2 | 13 | 0.1 |
| UNKNOWN | 249 | 138 | 140 | 174 | 185 | 886 | 7.5 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 4.4 Part of Body Injured

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| BACK | 673 | 695 | 696 | 720 | 781 | 3,565 | 30.3 |
| OTHER TRUNK | 337 | 305 | 322 | 332 | 374 | 1,670 | 14.2 |
| ANKLE(S) & FOOT(FEET)-NOT TOES | 285 | 257 | 265 | 248 | 282 | 1,337 | 11.3 |
| LEG(S) | 236 | 233 | 217 | 184 | 237 | 1,107 | 9.4 |
| MULTIPLE BODY PARTS | 126 | 107 | 146 | 192 | 246 | 817 | 6.9 |
| HAND(S) | 119 | 137 | 143 | 138 | 134 | 671 | 5.7 |
| OTHER UPPER EXTREMITIES | 105 | 118 | 129 | 120 | 114 | 586 | 5.0 |
| FINGER(S) | 117 | 124 | 103 | 95 | 100 | 539 | 4.6 |
| NECK | 110 | 109 | 96 | 85 | 111 | 511 | 4.3 |
| OTHER HEAD | 86 | 116 | 113 | 65 | 114 | 494 | 4.2 |
| OTHER LOWER EXTREMITIES | 49 | 45 | 42 | 26 | 41 | 203 | 1.7 |
| EYE(S)-OPTIC NERVE,VISION | 36 | 41 | 43 | 41 | 27 | 188 | 1.6 |
| BODY SYSTEMS | 15 | 11 | 8 | 4 | 13 | 51 | 0.4 |
| UNKNOWN | 6 | 10 | 8 | 5 | 5 | 34 | 0.3 |
| OTHER BODY PARTS | 1 | 3 | 3 | 4 | . | 11 | 0.1 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

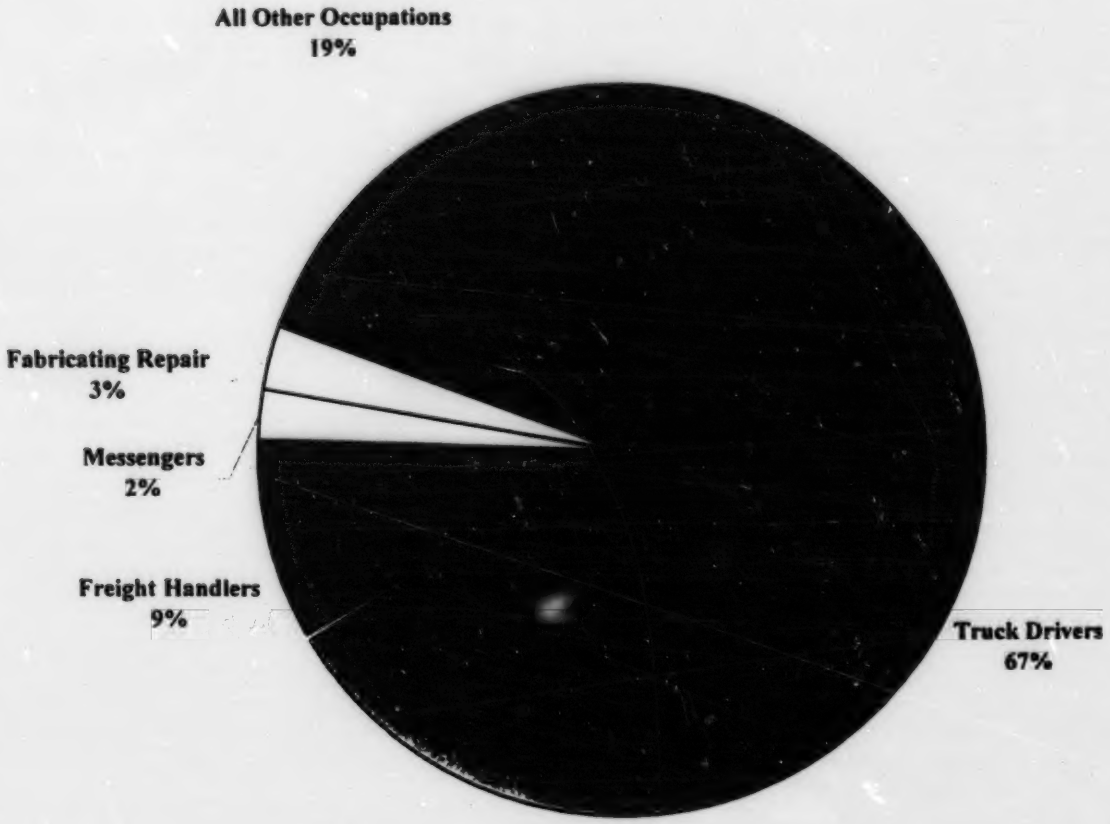
## 4.5 Source of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| VEHICLES | 423 | 463 | 477 | 383 | 518 | 2,264 | 19.2 |
| STRUCTURES/SURFACES | 348 | 363 | 396 | 403 | 475 | 1,985 | 16.8 |
| CONTAINERS | 260 | 290 | 327 | 343 | 378 | 1,598 | 13.6 |
| PERSONS-INJURED WORKER | 301 | 273 | 261 | 278 | 269 | 1,382 | 11.7 |
| PARTS & MATERIALS | 225 | 286 | 253 | 206 | 243 | 1,213 | 10.3 |
| MACHINERY | 53 | 70 | 81 | 81 | 99 | 384 | 3.3 |
| OTHER SOURCES | 69 | 73 | 47 | 48 | 61 | 298 | 2.5 |
| FURNITURE & FIXTURES | 54 | 43 | 56 | 52 | 45 | 250 | 2.1 |
| HANDTOOLS-UNPOWERED | 38 | 39 | 29 | 31 | 35 | 172 | 1.5 |
| OTHER TOOLS/EQUIPMENT | 20 | 30 | 16 | 31 | 21 | 118 | 1.0 |
| CHEMICAL/CHEMICAL PRODUCTS | 24 | 24 | 28 | 16 | 20 | 112 | 1.0 |
| MINERAL-METALS/NONMETALS | 13 | 11 | 9 | 10 | 15 | 58 | 0.5 |
| PLANTS & ANIMALS | 9 | 9 | 9 | 6 | 16 | 49 | 0.4 |
| HANDTOOLS-POWERED | 4 | 8 | 2 | 4 | 4 | 22 | 0.2 |
| PERSONS-NOT THE INJURED WORKER | 1 | 5 | 3 | 4 | 2 | 15 | 0.1 |
| OTHER PLANTS/ANIMALS/MINERALS | 3 | 2 | 4 | . | 3 | 12 | 0.1 |
| UNKNOWN | 456 | 322 | 336 | 363 | 375 | 1,852 | 15.7 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

# 5. Characteristics of the Injured Worker

## 5.1 Occupation of Injured Worker

**Lost-Time Claims by Occupation of the Injured Worker**
**Alberta Trucking Industry Association**
**1996-2000**



## 5.2 Age of injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| 15-19 YEARS | 55 | 74 | 58 | 59 | 75 | 321 | 2.7 |
| 20-24 YEARS | 223 | 215 | 259 | 251 | 264 | 1,212 | 10.3 |
| 25-34 YEARS | 718 | 736 | 665 | 660 | 713 | 3,492 | 29.6 |
| 35-44 YEARS | 727 | 727 | 719 | 698 | 784 | 3,655 | 31.0 |
| 45-54 YEARS | 398 | 367 | 419 | 423 | 501 | 2,108 | 17.9 |
| 55-64 YEARS | 158 | 171 | 185 | 150 | 216 | 880 | 7.5 |
| 65 YRS AND OVER | 17 | 17 | 27 | 15 | 26 | 102 | 0.9 |
| AGE-UNSPECIFIED | 5 | 4 | 2 | 3 | . | 14 | 0.1 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 5.3 Length of Time Employed

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| A. LESS THAN 1 MONTH | 117 | 185 | 158 | 177 | 211 | 848 | 7.2 |
| B. 1 MONTH TO < 6 MONTHS | 410 | 492 | 445 | 414 | 520 | 2,281 | 19.4 |
| C. 6 MONTHS TO < 1 YEAR | 240 | 243 | 287 | 232 | 299 | 1,301 | 11.0 |
| D. 1 YEAR OR MORE | 892 | 798 | 840 | 903 | 895 | 4,328 | 36.7 |
| E. TIME-UNSPECIFIED | 642 | 593 | 604 | 533 | 654 | 3,026 | 25.7 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 5.4 Gender of Injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| MALE | 2,127 | 2,115 | 2,132 | 2,073 | 2,347 | 10,794 | 91.6 |
| FEMALE | 125 | 139 | 161 | 159 | 193 | 777 | 6.6 |
| GENDER-UNSPECIFIED | 49 | 57 | 41 | 27 | 39 | 213 | 1.8 |
| Total | 2,301 | 2,311 | 2,334 | 2,259 | 2,579 | 11,784 | 100.0 |

## 6. Cost of Claims and Total Premiums

| | Occurrence Year | | | | |
|---|---|---|---|---|---|
| **Transaction Year** | **1996** | **1997** | **1998** | **1999** | **2000** |
| **1996** | $7,235,222 | | | | |
| **1997** | $5,325,061 | $8,715,134 | | | |
| **1998** | $2,317,933 | $6,163,170 | $8,895,576 | | |
| **1999** | $2,444,047 | $3,198,216 | $7,040,793 | $8,761,693 | |
| **2000** | $2,027,613 | $2,078,046 | $4,138,665 | $7,636,739 | $12,188,718 |
| **Total** | **$19,349,876** | **$20,154,566** | **$20,075,034** | **$16,398,432** | **$12,188,718** |
| **Total Premiums** | **$40,122,052** | **38,286,461** | **$32,032,419** | **$24,047,088** | **$31,233,954** |

The above claim cost and premiums are for the five-year period 1996 through 2000. The data is as of October 5, 2001.

The claim cost amount reflects only paid cost on claims, which have occurred in the five-year period. These paid costs are tracked by year of occurrence and year that the costs were transacted.

The premiums are the total of premiums paid by all employers in these industries for each year.

## 7. Occupational Fatalities

An occupational fatality is the death of a worker that results from a work-related incident or exposure. Alberta Labour classifies occupational fatalities into three general types: motor vehicle incident, workplace incident and occupational diseases. Each is described in detail below.

*Motor Vehicle Incident*

Motor vehicle incidents typically involve highway vehicles operating on public roads in which the fatally injured worker was either the driver or a passenger. This category also includes fatalities involving airplane crashes, train crashes, helicopter crashes.

*Workplace Incident*

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. It is this type of fatality that Alberta Labour may be responsible for investigating.

*Occupational Diseases*

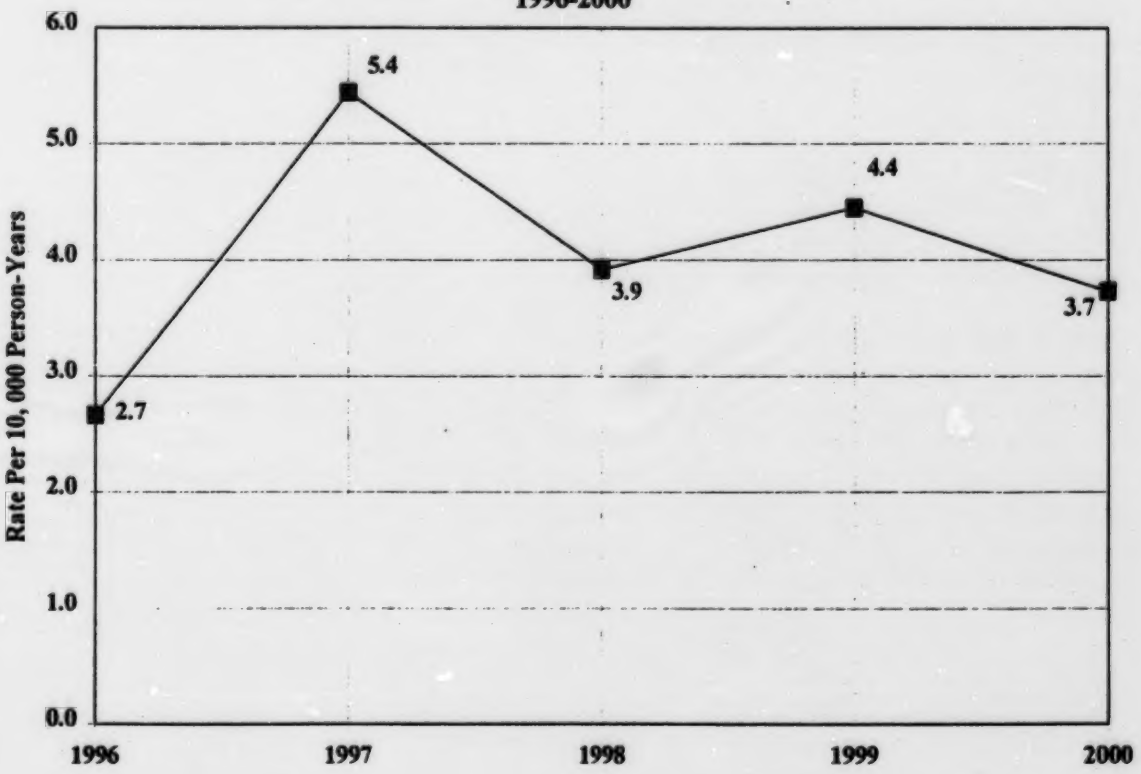
Occupational disease fatalities consist mostly of recognized occupational disease, that is, disease known to be primarily or exclusively work-related (e.g. asbestosis, black lung disease). Occupational diseases are frequently diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the fatal exposure occurred. Thus, the occupational disease category should not be interpreted to reflect present work site hazardous conditions or exposures.

Each year the Workers Compensation Board (WCB) accepts some occupational fatality claims for compensation. Claims accepted in a particular year do not imply the fatalities occurred in that year.

## Occupational Fatalities Accepted by the WCB
## Alberta Trucking Safety Association Industries
## Alberta: 1996-2000

| YEAR | Occupational Diseases | | Motor Vehicle Incidents | | Workplace Incidents | | Total | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| 1996 | 0 | 0 | 5 | 62.5 | 3 | 37.5 | 8 | 100 |
| 1997 | 2 | 11.1 | 14 | 77.8 | 2 | 11.1 | 18 | 100 |
| 1998 | 1 | 7.1 | 11 | 78.6 | 2 | 14.3 | 14 | 100 |
| 1999 | 2 | 12.5 | 7 | 43.8 | 7 | 43.8 | 16 | 100 |
| 2000 | 0 | 0 | 9 | 64.3 | 5 | 35.7 | 14 | 100 |
| Total | 5 | 7.1 | 46 | 65.7 | 19 | 27.1 | 70 | 100 |

## Estimated Fatality Rates
## Alberta Trucking Safety Association Industries
## 1996-2000



## 8. OHS Investigated Workplace Fatalities: 1996 - 2000

***General Trucking Services (14)***

YEAR: 1996 FILE: 0836
OCCUPATION: Truck Driver AGE: 40
INDUSTRY: Trucking Service
EXPERIENCE: 14 years

DESCRIPTION: A truck driver travelling in the area south of Lac La Biche became caught in a ditch, with his trailer at an incline. The driver attempted to back the caterpillar crawler he was carrying off his truck trailer. The crawler suddenly flipped 180 degrees over, landing on the driver causing fatal injuries

YEAR: 1997 FILE: 0855
OCCUPATION: Truck Driver AGE: 52
INDUSTRY: Trucking Services, General
EXPERIENCE: 15 years

DESCRIPTION: The worker was employed as an owner/operator truck driver for a gravel haul on a secondary highway. The driver was manoeuvring around a curve on the crest of a hill and the truck lifted and flipped onto its cab. The vehicle roof collapsed and the driver was fatally injured due to asphyxia.

YEAR: 1997 FILE: 0868
OCCUPATION: Truck Driver AGE: 41
INDUSTRY: Trucking Services - General
EXPERIENCE: Unknown

DESCRIPTION: The roadbuilding crew arrived at the site around noon to prepare the road for paving. A skid steer loader was in operation spreading materials and doing final preparations in the alley. A grader was also in operation carrying out the same work. A tandem dump truck was positioned to unload. The skid steer loader was being operated between the sidewalk and the tandem dump truck. The skid steer loader operator was "back blading" material (operating the skid steer in reverse, positioning the front edge of the bucket down so a smooth, properly graded aggregate bed could be prepared. The skid steer loader was "back-blading" when it came in contact with the tandem dump truck driver. The truck driver received crushing injuries when he was pinned between the stationary tandem dump truck and the skid steer loader, resulting in death.

YEAR: 1998 FILE: 0890
OCCUPATION: Truck Driver AGE: 37
INDUSTRY: Trucking, General Delivery Services
EXPERIENCE: 19 years

DESCRIPTION: Two workers were preparing to remove bundled piping that was on a transport trailer. The bundled piping was positioned on the trailer in two loads, a front load and a rear load.

The truck driver removed the straps securing the rear load and the forklift operator positioned his equipment to start the process of unloading the piping. The truck driver was removing the final strap securing the front load of piping, when a bundle of piping was dislodged, crushing the truck driver against the railing of the transport trailer and fatally injuring him.

YEAR: 1998 FILE: 0901
OCCUPATION: Driver Trainee AGE: 59
INDUSTRY: Trucking General Delivery Services
EXPERIENCE: N/A

DESCRIPTION: Two workers were employed by a trucking company and were hauling crude oil from production tanks to a dump station. The workers had just loaded the tank trailer and had travelled approximately 2 kilometres. The driver of the truck failed to negotiate a left hand curve on the road causing the truck to roll over on the side of the road, skid into the right hand ditch and come to rest upside down. The driver trainee who was in the passenger seat was crushed to death in the cab of the truck.

YEAR: 1998 FILE: 0902
OCCUPATION: Truck Driver AGE: 51
INDUSTRY: Trucking, General Delivery Services
EXPERIENCE: Unspecified

DESCRIPTION: A truck driver sustained fatal injuries when the loaded semi-trailer he was operating rolled upside down in a ditch on an oil lease road. He was employed by a trucking company that was contracted to transport oil and water from production wells to a treating facility. The worker failed to negotiate a curve in the road and the truck rolled, crushing the driver in the cab.

YEAR: 2000 FILE: 928
OCCUPATION: Truck Driver AGE: 62
INDUSTRY: 50714
EXPERIENCE: 10 Years or more

DESCRIPTION: A truck driver arrived on site to pick up an order of LVL pipe. The foreman agreed to move some yellow wrapped LVL on top of an adjacent stack to allow the truck driver to drive forward through the yard into position for loading. While the LVL was being positioned to form a single stack, the truck driver moved his truck and parked along side a stack of black wrapped LVL. As these bundles were 14.63 metres in length, two forklifts were required to move in a coordinated manner. As the operators began to backup the forklifts, operator #1 saw the truck driver walk between his truck and the black wrapped LVL stack. At about the same time, operator #1 observed that the top two bundles of black wrapped LVL were beginning to slide. Two bundles of LVL fell from the stack – pinning the truck driver between the rear truck tires.

YEAR: 1999 FILE: 0933
OCCUPATION: Mechanic AGE: 45
INDUSTRY: Trucking, General Delivery Services
EXPERIENCE: 3 ½ Years

DESCRIPTION: During the process of fixing a leak in the piping system of a hot oiler unit, the mechanic opened a valve on the piping system that released about 1½ barrels of flammable fluid onto the floor. The mechanic instructed a worker to get the vacuum truck to suck up the fluid. He then asked the swamper to move the pressure truck to allow access for the vacuum truck. The swamper left the working deck of the hot oiler to move the pressure truck when he heard a WHOOSH sound followed by flames rolling out between the axle of the hot oiler. The swamper's coveralls caught fire but they were quickly extinguished. However, a short time later, the mechanic emerged from the burning building totally engulfed in flames. A customer in the convenience store extinguished the flames with water, and the injured mechanic was transported to a hospital where he later died.

YEAR: 1999 FILE: 0935
OCCUPATION: Truck Driver AGE: 33
INDUSTRY: Trucking, General Delivery Services
EXPERIENCE: unknown

DESCRIPTION: Two forklift operators were in the final stages of loading finished product lumber bundles onto the front trailer unit of the driver's truck. The truck driver had been strapping down loaded bundles on the back unit and walked from the back of the trailer to the front to retrieve a piece of equipment. The forklift operator on the driver's side of the trailer saw the truck driver and waited for him to move out of the way before placing the base bundle of lumber on the truck.

The forklift operator on the passenger's side of the trailer was not aware of the delay and proceeded to place the centering bundle onto the base. The centering bundle tipped over, fell to the trailer deck and then to the ground. The driver was struck by the falling lumber and died one week later in hospital due to complications from his injuries.

YEAR: 1999 FILE: 0944
OCCUPATION: Truck Driver / Company Owner AGE: 41
INDUSTRY: Trucking Service - General
EXPERIENCE: 24 years

DESCRIPTION: A truck driver brought a truckload of produced sour emulsion from an oil production facility to an oil recycling plant. While the truck driver was waiting in line to unload the product, he climbed on top of the truck tank to collect a sample of the produced sour emulsion. After collecting a sample from the truck tank, he proceeded to the top of the pup tank to collect another sample. When the truck driver opened the pup hatch, he was exposed to hydrocarbon vapours and hydrogen sulphide released from the pup tank. After exposure, the truck driver fell approximately three metres to the ground and sustained fatal injuries. The truck driver was not wearing any respiratory protective equipment.

*There were four fatalities in 2000 that are still under investigation*

***Specialized Trucking Services (2)***

| | | | |
|---|---|---|---|
| YEAR: | 1997 | FILE: | 0884 |
| OCCUPATION: | Truck Driver - Owner /Operator | AGE: | 36 |
| INDUSTRY: | Specialized Trucking Service | | |
| EXPERIENCE: | 5 years | | |

DESCRIPTION: The owner/operator of a tractor-trailer unit was engaged in delivering farm feed to a farm. He had completed off-loading the product into farm supplied storage bin adjacent to the farm access road. The operator had parked the unit under a 14,400 volt overhead power line with a ground clearance of 7.2 metres, to off-load into the last storage bin. The operator was carrying a fully extended 3 metre aluminium handled telescoping broom, climbed the ladder at the rear of the trailer to sweep out the trailer unit bins. The owner/operator swung the head of the broom up over his shoulders and contacted the power line resulting in fatal injuries.

| | | | |
|---|---|---|---|
| YEAR: | 1998 | FILE: | 0899 |
| OCCUPATION: | Load Specialist | AGE: | 49 |
| INDUSTRY: | Specialized Trucking Service | | |
| EXPERIENCE: | 7 years | | |

DESCRIPTION: A combination trailer is a multiple-axle unit that can be used to move oversized loads. The trailer involved in the incident has four components. The last, the rear dolly, is comprised of two or three axles, and can be steered by an operator who uses a cable and remote control. This steering allows the unit to manoeuvre in areas where it would be impossible to negotiate curves and turns due to the length of the tractor and trailer. The total length of the Kenworth tractor and combination trailer was 48.5 metres.

A 50 000 kg skid mounted gas processing unit was being transported from the manufacturer's yard. The skid was loaded on the tractor trailer unit and was being moved through the yard. The tractor became stuck in a muddy area and another tractor on site was used to pull the unit on to dry solid ground. The loaded tractor then proceeded to back up and a 2.4 metre projection on the right side came close to another skid stored in the yard. In an effort to clear the load past the obstacle, the load specialist in consultation with the driver decided to steer the rear dolly about one metre to the left. Unknown to the driver, the load specialist positioned himself from the right side of the rear dolly to its left side, directly in front of a set of wheels. The vehicle started to move forward slowly and suddenly accelerated as it regained traction. The load specialist, who was in radio contact with the driver but could not be seen by him, was run over and killed by the tires on the rear dolly.

***Garbage Collection and Disposal (0)***

## Appendix A: Terms, Definitions, and Formulas

**Lost-Time Claim**

A lost-time claim (LTC) is a claim for an occupational injury or disease, which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities, and cases in which the injured worker is assigned light duties or other modified work.

**Person-Years**

Person-year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Human Resources and Employment uses these data to estimate an average industry wage, and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

**LTC Rate**

The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The LTC rate represents the probability or risk of disabling injury or disease to a worker during a period of one-year work. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTCs X 100}}{\text{Estimated Person-years}}$$

**Duration (Days Lost)**

The duration of disability is the number of days following the injury or disease for which the worker was disabled, and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Human Resources and Employment obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

**Duration Rate**

The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years worked, and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days X 100}}{\text{Estimated Person-Years}}$$

## Appendix B: Trucking Safety Association 2000 Industry Codes

Industry 50701~Specialized Trucking Services

Industry 50714~General Trucking Services

Industry 57901~Garbage Collection & Disposal

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